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Mareeva, Svetlana V.; Lezhnina, Yulia P.

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Income Stratification in Russia: What do Different Approaches Demonstrate?

Svetlana V. Mareeva* & Yulia P. Lezhnina

Abstract:

This paper provides an empirical analysis of income stratification in contemporary Russian society and its dynamics in recent decades. The paper presents a detailed analysis of different approaches (absolute and relative) to defining income groups. It indicates that the most widely used thresholds of the absolute approach cannot be efficiently applied to contemporary Russian society, as they fail to define the subgroups within the population, while the relative approach, based on the median income as the social standard of living, appears more effective for income stratification in Russia. A specific income stratification scale is suggested. Its application shows that middle-income groups currently dominate the income structure; however, the incomes of their representatives are not high in absolute terms and their living standards are quite modest. Income stratification in Russia has noticeably transformed over the last 20 years – the middle-income group has been growing while the low income and high-income groups have been declining. The proposed scale implies potential for structural adjustments such as regional- and settlement-specific disparities in income distribution; it can be easily replicated and opens up the potential for future research across broad areas, including international comparisons of income stratification in societies undergoing transitional processes.

Keywords: Russia; income; income groups; stratification; poverty; wealth; middle class.

Introduction

Income stratification seems to be one of the most straightforward approaches to analysing the structure of a society, as it applies a one-dimensional gradualist scheme of stratification: a ‘low income – high income’ scale, and makes it possible to define hierarchically arranged groups (economic classes) on the basis of income. Income stratification commonly operates with three broad categories: poor, middle class and wealthy (high-income, affluent) and different subgroups within or between these (Eisenhauer, 2011). Income stratification scales are used to obtain and compare quantitative estimates of well-off and poor groups, to gauge the risk of vulnerability to poverty and low income (López-Calva & Ortiz-Juarez, 2014), and to assess the degree of inequality (World Bank, 2016). This type of stratification is widely used for international cross-country comparisons (Meyer & Sanchez-Paramo, 2014), as it is based on income level, which is a relatively universal indicator. It is also important for social policies and being used to set thresholds that define the poor and needy among the population who may be eligible for welfare; therefore, different approaches to income stratification might mean different groups of poor are supported by social policy (Anikin & Slobodenyuk, 2018).

However, choosing a scale for income stratification is not a trivial methodological exercise. The methods used to define groups based on their positions in the income distribution can be summed up in two broad approaches – absolute and relative, which are conceptually similar to the definition of absolute and relative poverty (Foster, 1998) or absolute and relative inequality (Niño-Zarazúa, Roope, & Tarp, 2017). Most of these approaches (and the resulting income thresholds) have been developed for different purposes and countries at different stages of social and economic

* E-mail address of the corresponding author: smareeva@hse.ru

development¹, so they are only to a certain extent applicable to Russia (Lokshin & Yemtsov, 2013). Moreover, as will be demonstrated later, the methods in use mostly focus on defining certain groups among the population rather than devising an income stratification scale for society as a whole. Therefore, the paper aims to contribute to existing literature by defining a suitable method for capturing income stratification in contemporary Russia at its current level of development and characterising its general configuration and dynamics in recent years.

Russia makes an interesting case study for income stratification for several reasons. As in many societies in transition, the 1990s saw a drastic change in the socio-economic situation in the country. Economic liberalization reforms, including price liberalization in 1992, led to soaring prices and a respective drop in real income for the population as a whole, as well as a drastic aggravation of social differentiation. Unemployment and high inflation, as well as the non-payment of salaries and pensions, along with social benefits that were insufficient to cover even the minimum subsistence level caused a significant deterioration in people's incomes and contributed to mass poverty within the population during this period. However, as the country's economy and population adapted to the new reality, the situation began to change. Starting from 2001, the share of the population classed as poor fell every year (this trend continued steadily till the start of the new economic crisis in 2014) as a result of increased minimum rates of pay and social benefits, including the rapid growth of pensions, the elimination of salary non-payment and the reduction of employment in low-paid sectors of the economy. The growth of the population's income over the past decade led to a qualitative change in the proportion of affluent and disadvantaged groups. However, the configuration of the income structure in general and its dynamics have not yet been the focus of analysis. Most Russian literature is devoted to the analysis of separate groups (mostly, the poor) or incomes of the population in general and their inequality ("Dinamika...", 2014; Abanokova & Lokshin, 2014; Bobkov, 2012; Lukyanova, 2013; Mozhina, 2001; Shevyakov, 2010), while not attempting to describe the general income stratification model for society as a whole or analyse changes in its configuration caused by shifts in the relative shares of different income groups over the years. It is this approach that determines the scientific contribution of the paper.

Achieving the stated goal requires several steps: reviewing the key approaches to absolute and relative income stratification, applying them to empirical data from the last few years, choosing a specific scale of income stratification for Russia that works most efficiently in describing the modern reality, and evaluating the specifics and dynamics of income stratification by applying it to empirical data.

The first section of this paper describes different approaches to income stratification, while in the second section we apply some of these methods to the representative Russia-wide survey data. We offer an income stratification scale based on the median income and define the proportions of different social groups in Russia identified on the basis of their income, provide the basic characteristics of their standards of living and show the dynamics of income stratification in Russia for 1994–2015. In conclusion we sum up our findings and propose questions for future research.

Income-based social stratification: general approaches and scales

The main methodological issue for income stratification is to select from available approaches that apply different concepts and criteria when defining income groups: absolute income thresholds (distinguishing income groups in relation to a clearly defined amount of income), or relative income thresholds (based on the mean (less often) or median (more often) income, or income distribution by percentile groups) and the boundaries for different groups within the scale. We will start by reviewing these approaches and the reasoning behind them, as well as providing examples of the boundaries used in different versions of the absolute and relative approaches.

¹ In the paper, we use terms 'developed' and 'developing' countries to describe societies with different economic and socio-cultural levels of development. In line with other studies, we prefer to apply this terminology rather than to use the World Bank's approach, that of distinguishing high- and low-income countries, because the concept of socio-economic development provides a broader set of analytical tools for understanding the fundamental differences between countries. See, for example: Chun, N., Hasan, R., Rahman, M. H., and Ulubaşoğlu, M. A. (2016) and Mitra, S., Posarac, A., and Vick, B. (2013).

One of the complications of income-based stratification lies in the fact that many studies in this area focus not on the society as a whole, but on definitions of separate groups (poor, middle class, wealthy) and the subgroups among them. In some cases, the threshold of poverty is used as the lower boundary when defining the middle class; however, in other cases middle class (middle strata) is defined separately, without discussing whether those who are below the set level can be considered poor or whether there is an interim group of vulnerable to poverty, but not yet poor. Defining the upper boundary of the middle class or thresholds for high-income strata is even more problematic and there is no consensus on where high income begins. That leads us to the need to review literature devoted to separate income groups within the absolute and relative approaches.

Absolute scales of income stratification

The absolute approach to income stratification is largely borrowed from the corresponding understanding of poverty starting from Rowntree (1901; 1913) – via setting a quantitative needs-based poverty line, which is typically defined as a monetary cut-off point set at subsistence level which is in turn set at the value of goods and services (the consumer basket) necessary for satisfying essential needs and meeting mandatory payments. Administrative regulations may set the relative share of non-food commodities in the consumer basket (as is done in Russia and the USA).

Following this logic, the Russian Federal Service for State Statistics (FSSS) defines groups of the poor for statistical and analytical purposes (“The Federal State Statistics...”, 2015) based on the comparison of the incomes of households to the subsistence minimum. Statistical services in many other countries, including the joint Statistics Service of the CIS (and not only the low- and middle-income ones), also use the subsistence level to define the poverty threshold (Yasinskiy, 2014). The definition of poverty in the US follows the same principles.

National poverty lines, defined in specific geographical, economic, cultural and other contexts, make international comparisons only partly relevant. It is also necessary to take into account the nation's stage of economic development when defining the boundaries of its income groups (Cowell, 2011).

In comparative research, the methodology of the World Bank (WB) on poverty measures and their variations are widely used (Chen & Ravallion, 2010a, 2010b, 2011; Ravallion, 2008; Ravallion, Chen, & Sangraula, 2009; Ravallion, Datt & van de Walle, 1991). This method draws income group thresholds according to the poverty lines of the countries in the WB sample (126 countries in total). This approach was constructed and used mainly for the analysis of the situation in developing countries (22 in the 1980s), and their poverty lines served as the basis for the poverty threshold in the method in general.

In the past, the WB widely used a global poverty measure set at \$1 per day. The original ‘\$1-a-day’ method was an average of absolute lines (Ravallion et al., 1991), converted to international dollars at purchasing power parity (PPP), for such regions as Africa, East Asia, and the Pacific and South Asia. For middle-income countries (in such regions as Europe and Central Asia, Latin America and the Caribbean, and the Middle East and North Africa), the original poverty headcount ratio was set at \$2 per day (the median poverty threshold for all developing nations). However, these values were reassessed several times because of the increased number of countries in the sample for international comparison, inflation in the US, a new methodology of collecting PPPs and other factors (Deaton & Aten, 2014). Numerous WB reports used various thresholds such as \$1, \$1.25, \$1.45, \$2, \$2.5 per day. Now, instead of the previously used thresholds values of \$1 and \$2, the WB uses \$1.9 and \$3.1 per day, respectively (2011 PPP). The amount equal to double the cut-off value of absolute poverty is seen as the threshold of vulnerability to poverty; that is, indicating a high risk of poverty.

The WB concept of drawing the poverty line is further applied to defining the middle class in the developing countries², though different thresholds are used for this purpose. Ravallion (2010) sets the lower boundary of the middle class in developing countries at the poverty line (\$2 per day) and the upper boundary (\$13 per day) at the poverty line in the US, therefore suggesting that members of the middle class in these countries are not poor compared to the living standards of the majority of their residents but are poor by the standards of developed or wealthy countries. He also notes that it can be useful to single out the upper middle class in developing countries at the lower boundary of at least \$9 per day (equal to the poverty line in Uruguay, which has the highest cut-off value of poverty among developing nations studied in Ravallion (2010)). The author believes that in order to be classified as 'Western middle class' one should at least have an income above the US poverty line.

Often the following version of the income stratification in Russia and other countries in Europe and Central Asia is proposed in WB publications: poor (\$5 or less); vulnerable (\$5–10); middle class (\$10 and more per day) (Meyer & Sanchez-Paramo, 2014). The middle class can be further subdivided also based on income: \$10–25 per day, \$25–50 per day, \$50 and more per day (Grant & Hansl, 2015). Applying the same approach to other regions, the respective income in dollars is different (see Vakis, Jamele & Lucchetti, 2015; Dang & Ianchovichina, 2016).

Different authors provide other variations of the absolute approach to defining middle class in the income structure of the population. Milanovic and Yitzhaki (2002), focusing on defining the global middle class, choose the upper boundary of its per capita income at \$50 per day, which is equal to the average income in Italy, the least wealthy among G7 members. The lower threshold is set at equal to the mean earnings in Brazil (\$12 per day). Kharas (2010) chooses the lower threshold of middle-class income in developing countries (\$10 per day) as equal to the average between the poverty lines of the two developed countries with the lowest of such values – Italy and Portugal (however, the ground for the upper boundary is different – the author proposes \$100, which is double the median income in Luxembourg, the richest of the developed countries).

Some papers verify the lower and upper bounds of middle class incomes by comparing their estimates to those produced by other approaches; for example, by relative approaches. For instance, Banerjee and Duflo (2008) define the middle class of developing countries as the group between the poor in these countries and the middle class in developed countries (e.g. the USA), setting the range of per capita income at \$2–10 per day (splitting them further into three groups: \$2–4, 4–6 and \$6–10), and compare their results to those of Easterly (2001) and Birdsall, Graham, and Pettinato (2000), who define middle class using a relative approach framework, via quintiles.

Other papers justify the lower and upper bounds of income using theoretical arguments. López-Calva and Ortiz-Juarez (2014), for example, define the lower boundary of middle-class income as the maximum level of bearable economic instability for the middle class; in other words, exhibiting a 10% probability of slipping into a poverty at a five-year horizon (which is the average level of poverty in countries like Argentina, Colombia and Costa Rica, but slightly lower than for the whole region).

Non-academic research centres also work towards income stratification scales using national poverty lines and findings from both WB studies and academic papers (see Table 1 regarding PEW Research Centre (2015) and Court and Narasimhan (2010)). For instance, Rose (2016) proposes an income stratification for the US, setting a 2014 income threshold for the poor at 1.5x³ the federal poverty line (i.e. up to \$30,000 equalised annual income for a household of three members), while the rich are defined in line with survey responses from people regarding the relative number of rich in the country; that is, 1–2%, corresponding to annual incomes of \$350,000. The population with incomes between these thresholds are categorised as middle class with the following subgroups:

2 In economic literature, the term 'class' is widely used in the sense of grouping of people on the basis of income (See, for example: Eisenhauer (2011)). Among sociologists, this approach is known as a 'simple gradational analysis', which is opposed to the measures of a class via 'differential control over income and labour' (Wright, 2004).

3 Here and below we use "x" meaning "times" (1,5 times federal poverty line).

upper-middle (from \$100,000 (5x the official poverty line) to \$350,000 per year), middle-middle (\$50,000 – \$100,000), and lower-middle (\$30,000 – \$50,000).

Approaches based on WB methodology in general can be considered ‘weakly relative’ (Ravallion & Chen, 2010b), since the living standards of high-income countries serve as benchmarks for affluent social groups in developing countries, and the income thresholds are based on calibrated national poverty lines. The disparity between the living standards of developing nations and the mass social strata of developed countries leaves little opportunity to propose a unified scale of income-based stratification for the developing nations. In the case of more prosperous nations, researchers either multiply these figures by some factor or use entirely different approaches. Since developed nations are more concerned about the issues of social exclusion and socio-economic deprivation (Townsend, 1987), rather than physical survival (as in African countries, for example), most developed countries apply relative poverty lines (or a ‘strongly relative approach’), whereas the absolute approach is most often used in developing countries.

Table 1 presents a review of the existing ways of categorising income groups using the methods based on the absolute approach.

Generally speaking, though there is no consensus in the literature on income stratification thresholds, the views on the upper threshold of the low-income and the lower threshold of the middle class strata are more congruent than estimates of the upper boundary of middle class or thresholds for high-income strata (in other words, there is more consensus about who can be considered poor than who can be defined as wealthy). For example, Rank (1999), Danziger, Gottschalk, and Smolensky (1989) and Hirschl, Altobelli, and Rank (2001) set the upper demarcation of the middle class at 8, 10 and 12x national poverty lines, respectively. Furthermore, theoretical justifications of these thresholds provoke many questions since they are often postulated in an ad hoc manner, or superficially considered.

Table 1: Absolute income thresholds for income stratification according to selected papers, in US dollars (PPP) per capita per day *

Authors, years	Low income			Middle income (MI)			High income	Geography of methodology implementation
	Extremely poor	Poor	Vulnerable to poverty	Lower MI	Middle MI	Higher MI		
Ravallion (2010); Ravallion et al. (2009)		1.25			2-9	9-13		Developing countries
Vakis et al. (2015)	below 2.5	2.5-4	4-10		10-50			Latin America and the Caribbean
Dang and Ianchovichina (2016)		below 2	2-4.9		above 4.9			The Middle East and North Africa
Meyer and Sanchez-Paramo (2014)		below 5**	5-10		10-50	above 50		Russia Federation, Europe and Central Asia
Grant and Hansl (2015)		below 5	5-10	10-25	25-50	above 50		Russia
Milanovic and Yitzhaki (2002)					12-50			Global middle class, 1993
Banerjee and Duflo (2008)				2-4	4-6	6-10		11 developing countries***
Kharas (2010); Cárdenas, Kharas, and Henao (2011)					10-100			Global middle class; Latin America
López-Calva and Ortiz-Juarez (2014)					10-50			Chile, Mexico, Peru
PEW Research Center (2015)		below 2	2.01-10		10.01-20	20.01-50	Over 50	All countries
Court and Narasimhan (2010) ****			9	9-15	15-40	40-77	Over 77	Developing countries, including Russia, Poland
<i>Based on poverty line, multiplication coefficient</i>								
Burkhauser, Smeeding, and Merz (1996)					2-5 and 0.75-5			USA & Germany
Rose (2016)		1.5		1.5-2.5	2.5-5	5-17.5	1-2%	USA
Hirschl et al. (2001)							8, 10 and 12	USA

Notes:

* As various authors focus on different social strata and/or present different configurations of social structures, some cells in the table hereafter (see Tab. 2) left blank, meaning these positions were not mentioned by the respective authors in their publications. The authors of this paper

aligned the income groups outlined by the researchers with the categories in the table to their own subjective discretion, as all the authors use their own classifications.

** It should be noted that some publications set the poverty threshold for Russia at \$4 per day (Statistika SNG, 2015). The “extreme poverty” and “poverty” levels for all the countries in the “Europe and Central Asia” region (where the WB places Russia) are set at \$2.5 and \$5 per day, respectively.

*** This classification was based on expenditures.

**** A referential adjustment to comparable indicators is provided.

Relative scales of income stratification

The relative approach to defining the boundaries between groups in income stratification is a major alternative to the absolute approach. It divides groups by income based either on percentile distribution or comparison with the average or median income that indicates an average standard of living in a specific society.

The definition of groups based on percentiles often focuses on the middle class and is carried out in a symmetrical manner. For example, Easterly (2001) and Barro (2000) rank everyone within the second to fourth percentiles (between 20 and 80%) as middle class. Dallinger (2013) applies the same boundaries but also proposes using quintiles ‘in order to capture the internal differentiation of the societal middle’ (Dallinger, 2013, p. 88). That is, the middle-middle class in a narrow sense is the middle 20% of the income distribution (quintile 3); lower-middle class is below this (quintile 2), and, upper-middle class is above (quintile 4). Partridge (1997) defines the middle class as Dallinger’s middle-middle class (quintile 3) only.

Quintiles other than the central ones are also used to define the middle class in academic literature, but less often. Alesina and Perotti (1996) as well as Bellettini and Ceroni (2007), for example, define the middle class as those in the third and fourth quintiles, whereas Solimano (2008) sets out the middle class as those within the third and ninth deciles.

The income boundaries of the most affluent groups are the most disputed issue in income stratification, even when divided by deciles. Peichl and Pestel (2011), as well as Bellettini and Ceroni (2007), set the respective upper boundary at the 80th percentile, which is in line with most other studies that consider the top boundary of middle-class income as the lower threshold of high-income groups (see Table 2). There are also approaches that rank a much lower share of the population (0.5–10%) as in the high-income strata: Solimano (2008) sets it at 10%, Dynan, Skinner, and Zeldes (2004) at 1% or 5%, Carroll (2002), Weicher (1997) and Wolff (2010) at 1%, Beeghley (2004) at 0.9%, and Feenberg and Poterba (2000) at just 0.5%; the well-cited work of Piketty uses several of these cut-offs (Piketty, 2014). However, the authors scarcely provide any clear reasons for their choice of income thresholds.

The percentile method is often criticized (e.g. by Birdsall, Graham, & Pettinato (2000)) because it yields groups of predetermined fixed sizes. This problem does not arise if the income stratification is based on median income; another advantage is that it eliminates the distorting effect of outliers.

OECD methodology, widely used by European statistics agencies, defines the poverty line at half the median household income of the total population (though 40%, 60% or 70% levels can also be used). Eurostat views the equivalized income of less than 60% of the median income in the country as the at-risk-of-poverty threshold (Eurostat, 2017). These figures are widely used by the academic community to define relative poverty indicators.

The relative approach based on median income traditionally defines the middle class as those with incomes ‘around’ the median income – from 0.75x to 1.25x (Thurow (1987), Birdsall et al. (2000), Pressman (2007), Pressman & Scott (2009), and Chauvel (2013)). Atkinson and Brandolini (2013) propose a theoretical reasoning for the 0.75x and 1.25x cut-offs. Following Horrigan and Haugen (1988), the authors suppose that the lower endpoint of the middle class should represent ‘an income significantly

above the poverty level' and 'comfortably clear' 'of being at-risk-of-poverty'. In the course of this, the at-risk-of-poverty line is set as 0.6x median of disposable money income (the sum of all cash incomes earned by the household, net of income taxes and social contributions), whereas the lower boundary of the middle class is defined as the at-risk-of-poverty line increased by 25% or 0.75x the median cut-off. In contrast, the rationale behind setting 1.25x of the median income as an upper endpoint of the middle class is less obvious, apart from its symmetry with the 0.75x threshold; the authors also stress that this threshold should not be treated as the "affluence line", since in that case a third or more of the population would form an "upper class" (Pressman, 2007), which is unrealistic. Therefore, Atkinson and Brandolini (2013) distinguish the middle class (0.75x – 1.25x) and the 'intermediary' lower and upper middle classes, located between the poor and the middle class and the middle class and the rich respectively (their boundaries are 0.6 – 0.75x and 1.25 – 1.67x of the median income).

Chauvel (2006) defines the lower and upper demarcations of the middle-class income within a wider range – from 0.50x to 2x relative to adjusted disposable income (total net income after taxes and transfers, adjusted by household size, where the equivalence scale is the square-root of the number of residents in the household). Later, Chauvel (2013), taking into account the work of his colleagues, particularly Pressman (2007) and Atkinson and Brandolini (2013), and analysing the equalised relative disposable income distribution curve, concludes that the middle class is not homogeneous and divides it into "lower" (0.75 – 1.25x median) and "upper" (1.5 – 2.5x median) segments. Grabka and Frick (2008) use the 0.7 – 1.5x median range for Germany, while Blackburn and Bloom (1985) apply values of 0.6 – 2.25x for the US, Vanneman and Dubey (2013) use 0.5 – 2x for India, and Ólafsson and Kristjánsson (2013) apply 0.75 – 1.5x for Iceland.

The US-based PEW Research Center (Fry & Kochhar, 2016) defines the middle class (or the population "with the average income level") as those with an annual income per household of three members (the closest integer number to the average household size in the US in 2015 – 2.5x) from 0.67 to 2x the nationwide median. OECD methodology uses the measure of middle-incomes as household net income between 0.75x and 2x the median (OECD, 2016).

The upper threshold of middle-class incomes, serving as the lower threshold for the rich, also has no agreed definition. Peichl, Schaefer and Scheicher (2010) see it as 2x the median, Brzezinski (2010) as 2, 3 and 4x the median (and the upper 1%, 5% and 10%). According to Medeiros (2006), the affluence line (a term he uses based on "poverty line" to define the rich) may be considered to be at the level of 4x standard deviations above the average income, which constitutes just 1% of the population in Brazil.

Attempts to justify the income demarcations of groups using the relative approach to stratification are more typical for studies focused on higher income strata. Atkinson and Brandolini (2013) believe that high-income groups should be able to hire personnel for some chores, such as babysitting and cleaning, and their net income after these kinds of services have been accounted for should not lead the family into poverty (i.e. should not fall below the 60% cut-off). Checking various ratios of spending for personal needs and the services of hired workers, these authors set the upper boundary of middle-class income at 2x and 3x the median income but do not comment on the relevance of their conclusions. Eisenhauer (2011, p. 297) defines the rich as those who "could, in theory, liquidate their assets, purchase risk-free bonds, and thereby generate sufficient after-tax interest income to remain above the poverty level indefinitely without incurring risk and without having to earn additional income through employment". Medeiros (2006) defines the affluence line as the level of income that enables the elimination of poverty (defined through a set monetary line) in society through redistribution. This approach is based on the national poverty line, not on the median income. According to Brazilian data for 1999, the poverty line was at the level of the income of the 33rd percentile of the population, while the affluence line exceeded this level by 26.8x (i.e. \$1,142 per month per household in 1999 prices).

There are also attempts to develop methods for defining the high-income group by adding wealth indicators. Hauser and Becker (2002), discussing the case of Germany in 1998, set the affluence line at double the median of equalised net income with additional assets in the value of one million German marks per household member.

Table 2 presents a review of studies on income stratification and social group thresholds using the relative approach. This method is mostly used in income stratification research in developed countries. However, the relative approach lacks transparency for international comparisons (Ferreira, Messina, Rigolini, López-Calva, Lugo, & Vakis, 2013). The adherents of the relative approach lack consensus in the selection of thresholds in income stratification and reasoning (as with the absolute approach).

Table 2: Relative income thresholds for income stratification according to selected papers

Authors, years Extremely poor	Low income			Middle income			High income		Geography of methodology implementation
	Poor	Vulnerable	Lower MI	Middle MI	Higher MI	Affluent	Rich		
Based on quintiles or percentiles, quintiles/ percentiles									
Alesina and Perotti (1996); Bellettini and Ceroni (2007)					3-4 quintiles				71 countries; 22 countries (OECD)
Partridge (1997)					3 quintile				USA
Barro (2000); Easterly (2001)					2-4 quintiles				84 countries; 175 countries
Solimano (2008)					3-9 quintiles				129 countries
Peichl and Pestel (2011)							5 quintile		Germany
Dynan et al. (2004)								upper 1% and 5%	USA
Feenberg and Poterba (2000)								upper 0.5%	USA
Carroll (2002); Weicher (1997); Wolff (2010)								upper 1%	USA
Gornick, Jantti et al. (2013)					2-4 quintiles				High- and middle-income countries (LIS)
Dallinger (2013)				2 quintile	3 quintile	4 quintile			19 (post) industrial countries
Based on median, multiplication coefficient									
OECD		below 0.5							
Eurostat		below 0.6							
Blackburn and Bloom (1985)					0.60 - 2.25				USA
Davis and Huston (1992)					0.5-1.5				USA

Authors, years Extremely poor	Low income			Middle income			High income		Geography of methodology implementation
	Poor	Vulnerable	Lower MI	Middle MI	Higher MI	Affluent	Rich		
Thurrow (1984); Birdsall et al. (2000); Pressman (2007); Pressman and Scott (2009)					0.75 - 1.25				USA; 30 countries, including high-income transition economies and Latin America; 11 developed countries (LIS)
Chauvel (2013)				0.75- 1.25		1.5-2.5			France, Italy, Norway, USA
Grabka and Frick (2008)		below 0.5	0.5-0.7	0.7-0.9	0.9-1.1 1.1-1.3*	1.3-1.5	1.5-2	above 2	Germany
Peichl et al. (2010)		below 0.6					over 2		Germany
Eisenhauer (2011)		below 0.6						Calculated a richness line	Italy
Smeeding (2006)		below 0.5							11 developed countries (LIS) including the USA
Kangas (2001)		below 0.5					over 3		
Brzezinski (2010)							2, 3 and 4		Poland
Atkinson and Brandolini (2013)				0.6-0.75	0.75-1.25	1.25- 1.67	over 2 or 3		11 European countries, USA, Canada, Taiwan, Mexico
Ólafsson and Kristjánsson (2013)					0.75-1.5				Iceland
Vanneman and Dubey (2013)		below 0.5			0.5-2		over 2		India
PEW Research Center			below 2/3		2/3-2		over 2		USA

Note:

* Grabka and Frick (2008) define eight income groups, however, with more detailed focus on the middle income groups. To fit our classification, we consider them into one category.

To sum up, it can be claimed that the primary basis for selecting an approach to income stratification is the country's level of development. While research in well-developed and high-income countries requires the application of relative income thresholds that correspond to their average standard of living, it is more common in countries with low income and weak progress in modernisation to measure poverty on the basis of needs and adopt an absolute approach to stratification. In the case of Russia, the question of classifying it as a developed or a developing country is important because of its transitional state. It inevitably perplexes scholars searching for an income stratification model. The next section will address the empirical evidence surrounding this issue in contemporary Russian society.

Income stratification of the Russian society: what does empirical analysis demonstrate

Empirical Data

As shown above, different approaches to income stratification have been designed for various research purposes and for countries at different stages of social and economic development – so their efficiency may vary when applied to Russia. We now focus on choosing the most relevant approach to income stratification in Russia by applying some of the most widely used methods based on the absolute approach (WB method, the ‘Western middle class’ method) and relative approach to data provided by a nationwide representative survey – the Russian Longitudinal Monitoring Survey of the Higher School of Economics (RLMS–HSE⁴). The RLMS–HSE is a series of nationally representative household-based surveys designed to monitor the effects of Russian reforms on the health and economic welfare of households and individuals in the Russian Federation. It is conducted by the National Research University Higher School of Economics and ZAO Demoscope together with Carolina Population Center, University of North Carolina at Chapel Hill. The RLMS–HSE implies a multi-stage stratified probability sample. We use a cross-sectional sample from 1994 to 2015; the sample size amounts to 5,000–7,000 households in each year.

According to the capacities of RLMS–HSE data, we consider households as recipients of income; to calculate the proportion of various income groups, we consider the number of individuals residing in households with different income levels. For the relative approach, we also apply an equivalence scale that is described in the corresponding section below.

Absolute approaches to income stratification in Russia: empirical evidence

The *absolute* approach to income stratification is more familiar to Russian researchers since it is officially used in Russia for defining poverty; for this purpose, a subsistence level is used, and households and individuals can be grouped into poor / not poor according to how their income relates to the subsistence level. Income stratification based on the official subsistence level can be expanded by the further differentiation of the ‘not poor’ group into subgroups according to the ratio of their income and the subsistence level. The model of income stratification relative to the subsistence level helps gauge the proportion who are poor, and defines groups that are characterised by a higher risk of poverty; that is, population with incomes close to the poverty line. Sociological data show that the incomes of the largest group – almost one-third of the entire population – fall within 1 – 1.5x of the subsistence level; this is also where the median income lies (Slobodenyuk, 2017). This model of income stratification based on the subsistence level is important for the analysis of the poverty zone and the risks of it expanding; it also helps identify those who most need welfare assistance. However, to analyse the groups higher on the income scale, income thresholds in relation to the subsistence level must be further studied and validated.

Let us now turn to another well-cited version of the absolute approach that is used by the WB to define various income groups across countries. The income stratification model based on the WB methodology for Russia in 2014 and 2015 (using PPP calculated by WB at a USD/RUB PPP rate of 22.57 in 2014 and 23.97 in 2015⁵) is shown in Table 3.

4 Websites of the RLMS–HSE: <https://www.hse.ru/en/rlms/> and <http://www.cpc.unc.edu/projects/rlms-hse>.

5 Data source: World Bank data bank (<http://data.worldbank.org/indicator/PA.NUS.PRVT.PP?locations=RU>).

Table 3: Income stratification based on the World Bank methodology

Income groups	Daily income, \$ ¹²	2014		2015	
		Monthly per capita income, PPP, roubles	Share of income groups, %	Monthly per capita income, PPP, roubles	Share of income groups, %
Poor	2.5 and less	1,693 and less	0.4	1,798 and less	0.3
	2.5 - 5	1,693.1 – 3,386	2	1,798.1 – 3,596	1.2
Vulnerable	5 - 10	3,386.1 – 6,771	10.3	3,596.1 – 7,191	9.9
Middle class	10 - 25	6,771.1 – 16,928	54.6	7,191.1 – 17,978	56.3
	25 - 50	16,928.1 – 33,855	27.3	17,978.1 – 35,955	27
	Over 50	Over 33,855	5.4	Over 35,955	5.3

Source: RLMS-HSE, calculation by authors

The application of the WB methodology shows an extremely low share of the poor in Russia (just 1–2% even during the economic crisis) and those at high risk of poverty are about 10%. The overwhelming majority of the population falls within the middle class (though the lower-middle class prevails). Given that the minimum middle-class per capita income (\$10 per day) in this methodology equals around 7,000 roubles per month in PPP, this result is not surprising. This threshold is about 50% of the median income (which was 14,000 roubles per month in 2014 according to RLMS-HSE datasets, and 20,594 roubles per month according to FSSS; the former figure was unchanged in 2015 while the FSSS estimate increased to 22,729 roubles) and cuts off only the poorest group (0.5x median income is a widely used threshold of relative poverty). This threshold for the middle class is even lower than the official Russian subsistence level. Hence the middle class according to this definition is disproportionally large and heterogeneous, and even its division into three subgroups does not help analyse its inner structure, as over half of the population still falls within one subgroup (lower-middle class).

However, the followers of the WB approach highlight that these poverty thresholds are developed for the purposes of international comparison and have a limited application for the analysis of poverty in any given country (Lokshin & Yemtsov, 2013). In the course of international comparison, both statistical and survey data show that Russia is better off regarding population incomes than the other BRICS countries and developing nations. While in Russia per capita incomes below \$5 per day are almost non-existent, this level of income is typical for 20% of Brazilians, 30% in Chinese, over 50% of South Africans and most of the population in India.⁶ Income stratification in Russia is currently much closer to that of Western Europe (where most of the population are middle class and the relative number of the poor is small) rather than China or Latin America. This situation is the result of fundamental changes in Russian society, which have occurred over the last 15 years and can be traced using this methodology. The calculations by the WB show that only slightly more than a quarter of the Russian population (27%) belonged to the middle class in 2000, while this share increased to 60% by 2010. Sociological surveys show that the expansion of the middle class further continued in 2014–2015. Such drastic changes in personal income make the use of such poverty/middle-class income ranges inefficient at the current stage of Russia's economic development – they cannot define income subgroups within the largest part of the population and only cut off population with lowest and highest incomes. Russian society has already moved away

⁶ Calculations based on World Bank PovcalNet data, last available years for each country (2011–2015) are used.

from the minimum physical survival standard for the population that these ranges are based on (“Dinamika...”, 2014), so different methods of income-based stratification are needed. Therefore, most methods based on the absolute approach that set the middle-class income threshold at \$10–13 per day cannot be used for an income stratification model of contemporary Russia.

In order to give full coverage to the absolute thresholds that are used, following the approach by Ravallion et al. (2009), we now turn to the concept of the ‘Western middle class’ that include those who are not poor by US standards. The calculations based on US poverty thresholds using RLMS-HSE data for 2015 show that 45.9% of the Russian population can be considered poor while the remaining 54.1% enter the ‘Western middle class’ (data from 2014 show similar results – 44.6% were poor and 55.6% belonged to ‘Western middle class’). In the US, the picture is qualitatively different – official poverty rate was 14.8% in 2014 and 13.5% in 2015.⁷

These results provide entirely different estimates of poverty and the middle class in Russia. However, this approach cannot be used as a working model of income stratification as it defines only two groups, without taking into account their internal heterogeneity and the existence of other groups between them (vulnerable/needy population and so forth). The straightforward use of the US poverty criteria introduced in the concept of the ‘Western middle class’ for Russia is also debatable, since the gap in GDP between them is similar in scale to the gap between Russia and many developing countries, and their direct comparison cannot be relevant.

Therefore, the income group thresholds set for developing countries by the widely cited income stratification methodologies based on the absolute approach turn out to be not completely suitable for Russia regarding its stage of socio-economic development and the general aim of the study to construct an income stratification model for the whole society. Therefore, we now turn to the relative approaches.

Relative approaches to income stratification in Russia: selecting a scale

As demonstrated above, there are different versions of *relative* approaches and the income strata defined on their basis. Some of them predetermine the size of these groups while attributing specific income quintiles or deciles to certain income groups. In Russia, the data on the per capita income distribution by deciles and quintiles is published by the FSSS. This distribution has been slowly changing over the last 20–25 years but the relative share of the two lower quintiles in total income has been decreasing; the recent economic crisis reversed this trend (see Table 4). The FSSS data (and the sociological data) also show that income disparity is particularly significant between the upper decile (10%) and the rest of the population, and the same holds for the lower decile. The income increase in deciles two to nine is smoother, which demonstrates that there are fundamental differences between the higher and the lower income groups and the rest of the population.

⁷ Source: The Current Population Survey (CPS), Annual Social and Economic (ASEC) Supplement (https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-pov/pov-01.2015.html#par_textimage_10).

Table 4: Distribution of cash income in Russia by quintiles (20 per cent intervals), 1980–2017, %

Year	Distribution of cash income in Russia by quintiles				
	First quintile (lowest income)	Second quintile	Third quintile	Fourth quintile	Fifth quintile (highest income)
1980	10.1	14.8	18.6	23.1	33.4
1990	9.8	14.9	18.8	23.8	32.7
1995	6.1	10.8	15.2	21.6	46.3
1999	6.0	10.5	14.8	21.1	47.6
2003	5.5	10.3	15.3	22.7	46.2
2007	5.1	9.8	14.8	22.5	47.8
2011	5.2	9.9	14.9	22.6	47.4
2015	5.3	10.0	15.0	22.6	47.1
2017	5.4	10.1	15.1	22.6	46.8

Source: FSSS. Distribution of the total cash income and the specifics of cash personal income differentiation (http://www.gks.ru/free_doc/new_site/population/bednost/tab1/1-2-2.doc). Data for 2017 is preliminary,

However, this approach does not uncover the structural changes in income stratification and the size of the particular income groups; it only gauges the change in incomes and income distribution and says little about the dynamics of the income stratification model itself.

The second group of approaches, as shown above, sets income groups by measuring their incomes against the median values across the population. This method does not predetermine the sizes of low/middle/high income groups – they differ depending on the patterns of income distribution. This makes an assessment of the changes in the size of income groups possible, given the entire population. As this model measures the per capita household income against the median income, the structure and sizes of groups do not change if incomes grow or decrease evenly across all groups; changes to the model can occur only when patterns of income distribution change.

The FSSS provides some data based on this approach, but it mainly shows the share of low-income groups – those with less than 0.4 – 0.6x the median income. The sociological data can be used when defining other income groups under this approach. The key issue here, as with the absolute approach, is to set the appropriate income boundaries. Typically, the poverty level is set at 0.5 – 0.6x the median income; the middle-class threshold, as shown in the first section of the paper, is often set at 0.75 – 1.25x the median, and the upper middle-class boundary is 1.5 – 3x the median. These approaches are combined in different ways in various studies and publications.

Based on the literature review and statistical procedures, we suggest defining a total of five income groups. The poverty threshold is set at 0.5x the median income. The vulnerable population consists of those with income lower than 0.75x the median (the typical lower demarcation for the middle class). The median income group demonstrates a typical standard of living for the whole population (0.75 – 1.25x). The middle class (1.25 – 2x the median income) can be considered to be relatively well-off. Those with income higher than 2x the median income fall into the high-income stratum.

To account for household size and economies-of-scale, we chose to apply a well-cited OECD-modified equivalence scale currently used by Eurostat, according to which a weighting of 1 is assigned to the first adult, 0.5 to the second and to each subsequent person aged 14 and over, and 0.3 to each child aged under 14.⁸

Income stratification in contemporary Russia: specifics and dynamics

The results of applying the proposed scale presented in Table 5 show that most Russians are currently characterised by a close-to-median income (taking account of different equivalence scales, this amounts to 20,000 – 21,920 roubles or USD 834 – 914 in PPP⁹ in the World Bank version, per person per month in a median household). In autumn 2015, more than one-third of the population belonged to the median income group that represented the typical standard of living for the country as a whole, since it comprised that part of the population with income around the national median. The proportion of poor and vulnerable people was about 22–24% of the population, with the vulnerable having the larger share. The overwhelming majority of the poor also belonged in the zone of absolute poverty, according to the official subsistence level set regionally in Russia. Among the vulnerable, half of the group had incomes below regional subsistence levels, which proves the correctness of identifying them as vulnerable to poverty and balancing on its edge.

Other income groups can be considered as being relatively well-off – about one-quarter belonged to the ‘middle class’, and the high-income group comprised 13–16% of the population. However, as the median income, even accounting for the equivalence scale, is only 2 times higher than the official subsistence level (or less than 1.5 times higher in absolute terms), the standard of living for the vast majority of the median income group is quite modest, while the position of the ‘middle class’ is more favourable. In general, it is the demarcation between these two income groups that allows us to divide the Russian population into two major subgroups – the not well-off (around 60%) and the well-off (40%).

The relative scale that we propose is based on the country’s median income. However, in Russia, it is necessary to account for the various living standards across regions¹⁰ as well as in the urban and rural areas – the cost of living can vary widely, and the same levels of income can indicate fundamentally different living standards. Moreover, the official poverty line (subsistence minimum) is set independently in each region. The scale can be adjusted for these inequalities with the use of region-specific and settlement-specific median income values. There are countries with greater disparities between urban and rural incomes (e.g. India and China), while in Russia differences in the socio-economic development of regions are more important (Ovcharova, 2014).

We assessed the income structure using regional and settlement median income values (though it should be noted that RLMS–HSE data are not representative by regions, so that assessment can be viewed as a rough estimate only, demonstrating potential for further use). The results show that the proposed scale yields similar configurations of the income structure (‘middle class society’) for all three types of median (Table 5). However, with the use of regional or settlement values, the share of the median and middle-income groups increases, while the share of groups with the lowest and highest income declines.

⁸ For international comparisons, the square root scale is also widely used. But in practice the difference in results of using different scales is not significant (Castellani & Parent, 2010).

⁹ Using PPP calculated by WB at USD/RUB PPP rate at 23.97 in 2015.

¹⁰ By regions, following the administrative definition, we mean federal subjects of Russia, of which there were 85 as of 2018.

Table 5: Income stratification based on the median values for the country and adjusted for regions and types of settlement, 2015, %

Income groups	Household per capita income about income median (with OECD-modified equivalence scale)	Income median		
		by country	by settlement	by region
Poor	Lower or equal to 0.5 median	8.6	7.0	6.4
Vulnerable	0.5–0.75	15.5	15.9	15.3
Median group	0.75–1.25	37.3	39.4	42.4
Middle class	1.25–2	25.7	26.4	27.2
High income	Over 2x median	12.9	11.3	8.6

Source: RLMS–HSE, calculation by authors

While a complex analysis of the living standards of different income groups is not the aim of this paper, it is important to show some characteristics of the defined income groups to demonstrate the differences in their material well-being (Table 6).

The table indicates several important trends. First, consumer opportunities are significantly expanded from the lower to higher income groups. Differences are especially noticeable around opportunities to holiday abroad, making large-scale, expensive purchases, and paying for children's university education if necessary. Second, the standard of living that the median group demonstrates and which, by the nature of the thresholds used to determine it, is typical of the country's population as a whole, can be characterised as quite modest – the share of those satisfied with their material situation makes up only one-fifth of the group; the opportunities for qualitative improvements in consumption for its representatives are practically non-existent, and the 'safety margin' is not high – less than a quarter of the group have any significant savings.

On the other hand, the standard of living in the median group, as well as the standard of living in the groups with even lower levels of income (the vulnerable and poor), is already far from the level of survival in contemporary Russian society. Even among the poor, the vast majority have their own mobile phones, more than 60% have washing machines in their households, more than half own computers, and more than a third own cars; one-third of the representatives of this group can afford additional educational services for children.

The results also show that the freedom of choice among consumption models is available only to a subgroup of the middle class and high-income groups. That is demonstrated by their ownership of relatively rare durable goods (smartphones, tablets) and consumer opportunities that are not typical for the Russian population in general – the ability to afford major purchases, vacations abroad, and so on.

Table 6: Some characteristics of living standards in income groups, 2015, %

Aspects of consumption	Income groups				
	Poor	Vulnerable	Median group	Middle class	High income
Satisfaction with material well-being					
Completely or rather satisfied with material well-being	15.8	17.7	20.8	26.1	30.3
Do not worry about providing for themselves with necessities in the next 12 months	12.9	17.9	16.6	20.8	31.0
Consumption opportunities					
Have the opportunity to improve housing conditions if desired	3.0	4.0	4.0	9.2	15.4
Have the opportunity to save money for large purchases	3.1	5.0	8.9	23.6	36.8
Have the opportunity to spend the whole family vacation abroad	1.7	3.1	6.4	20.1	37.6
Have the opportunity to pay for their children's university education if necessary	11.7	26.0	29.3	40.9	61.0
Have the opportunity to pay for additional educational services for children if necessary	30.6	49.4	56.0	70.5	85.7
Property and durable goods ownership					
Have a TV in the household	98.0	99.7	98.9	98.5	99.4
Have a washing machine in the household	62.0	73.6	87.5	93.7	96.4
Have a dishwasher in the household	0.2	0.3	2.8	5.9	13.1
Have a computer / laptop in the household	55.2	66.9	74.5	87.7	95.0
Have a personal cell phone	79.9	81.3	79.8	74.0	64.9
Have a personal smartphone	7.3	11.0	18.0	32.1	47.9
Have a personal tablet	12.3	17.4	22.1	34.0	48.1
Have a car in the household	34.8	42.8	46.6	61.6	74.5
Savings					
Have household savings they can live on for 6 months or more	1.4	0.9	2.3	3.2	7.6
Have household savings they can live on for a few months, but less than six months	7.6	17.1	22.1	26.4	34.7

Source: RLMS-HSE, calculation by authors

Finally, let us turn to the question of what changes the income stratification of Russian society has undergone in the last two decades. The starting point is 1994, when the consequences of the liberal reforms launched in 1992 became fully manifest, and the situation in the country was characterised by an economic crisis. In 2015, the country was once again in the midst of an economic crisis, but one with different causes and consequences. Russian society entered a new stage of economic recession (in 2014) with qualitatively different characteristics of population income and living standards. Figure 1 presents the dynamics of the income stratification, based on the country income median and OECD-modified equivalence scale for 1994–2015.

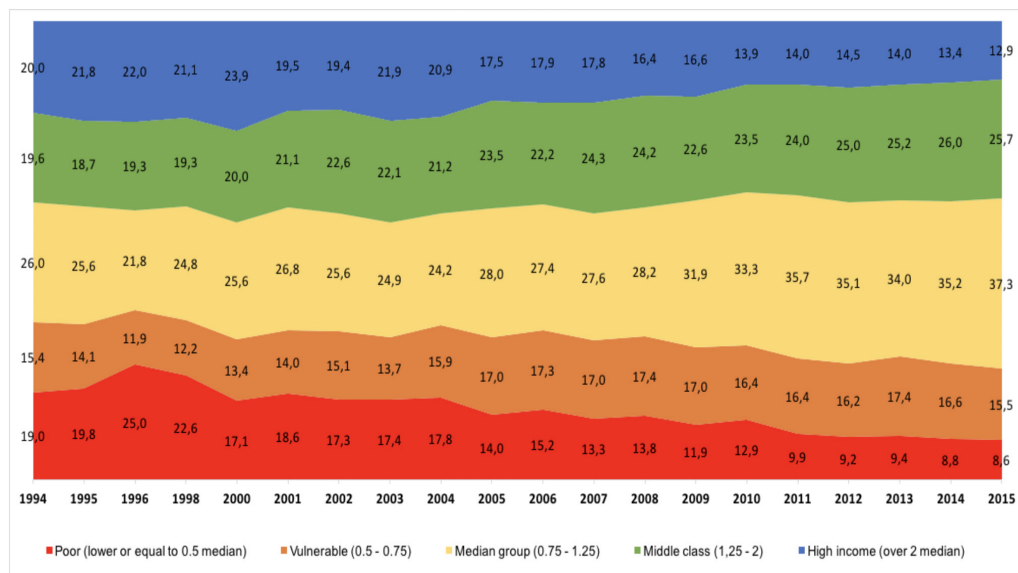


Figure 1: Income stratification according to the relative approach using the country's median income dynamics for 2014–2016, %

Source: RLMS-HSE, calculation by authors

As can be seen from Figure 1, the period from 1994 to 2015 was characterised by a gradual decline in relative income differentiation among the general population in Russia (without accounting for the upper and lower 3–4%, who were not included in the sample of mass surveys). Groups at opposite ends of the spectrum – those with incomes below 0.5x the median and more than 2x the median – significantly decreased as a share of the population during this period: in 1994, the share of the first group was 19.0% but by 2015 it had fallen to 8.6%; for the second group, these figures were 20.0% and 12.9% respectively. The decrease in the shares of these income groups was accompanied by the expansion of the median group, which in two decades has grown from a quarter of the population (26.0%) to more than a third (37.3%), and currently dominates the income structure. These trends concerning income stratification and changes in the proportion of income groups defined on the basis of the median income as an average standard are not fully reflected in the official statistics, which operate mainly with absolute indicators of income. As can be seen from the dynamics of the Gini coefficient, from 1994 to 2007, overall inequality in the country increased (0.409 to 0.422), and only then did it begin to decline slightly (to 0.412 in 2015), still remaining quite high from an international perspective.¹¹

However, the inequality indicators are calculated considering the high differentiation of income levels within the extremely poor and wealthy groups (incomes of which are estimated indirectly and re-evaluated). That allows us to obtain a general picture of the country, but distorts the situation among the mass population between the poorest and wealthiest (accounting for the

11 Data source: FSSS (URL: <https://fedstat.ru/indicator/31165>, extracted on 17.03.2018)

average standard of living and economies-of-scale). According to RLMS-HSE data, the last two decades were characterised by a tendency towards the equalisation of incomes and an increasing proportion of the population with incomes close to the median value; in other words, a growing number of people are living in roughly the same conditions and have a similar living standard that reflects the general living standard of the country, while being quite different from the typical conditions of the groups that are at the top and bottom of the income scale.

Conclusion

Constructing a scale of income stratification which can be used in empirical sociological research is not a trivial task. Different approaches can show different levels of effectiveness when applied to specific socio-economic conditions in a certain country. The choice between them should take into account their heuristic potential tested on empirical data reflecting the current conditions of the society of interest. There are various approaches to income stratification that can be divided into two broad categories – relative and absolute. Empirical analysis shows that the most widely used thresholds of the absolute approach cannot be efficiently applied to contemporary Russian society, which has undergone fundamental changes over the last 15 years regarding income, as they fail to define subgroups within the population. At the beginning of the 2000s, the situation in Russia was quite different and such approaches were relevant. Now absolute models of stratification rank Russia in line with developed rather than developing countries (in particular, the issue of extreme poverty – on the limits of physical survival – is gone), rendering absolute income bounds, set for the latter group of countries, irrelevant. This might be the case for some other societies in transition as well, which presents a challenging task when constructing a relative scale of income stratification that makes capturing the specifics of income groups in society and the dynamics in their composition possible. The task is somewhat complicated by the fact that many studies focus on defining one group / stratum in society (poor, middle class, wealthy) but not constructing a scale that classifies the entire population. In this paper, we propose a scale constructed according to the relative approach and based on median income as the social standard of living.

The application of the relative approach in this version shows that the income of most Russians is close to the median income of the country as a whole. Middle-income groups dominate; however, the lower group (median income group) outnumbers the middle class. The income of the median group is not high in absolute terms; its living standards are quite modest and are typical of Russian society in general. As of autumn 2015, about one-quarter of the Russian population was poor or at risk of poverty, but even their standards of living were far from the standards of survival.

The dynamics of income stratification in the period 1994–2015 demonstrate a gradual decline in income differentiation among the general population. Both poor and high-income groups have declined in share over the past twenty years, while the share of median groups has increased quite significantly – from a quarter to more than a third of the population. These trends complement the picture of the dynamics of income and income inequality, which can be obtained from official statistics.

These trends in the transformation of the income stratification can have both positive and negative consequences and call for a separate discussion. On the one hand, the reduction of income inequality in the mass strata reduces the problem of social tension in the low-income and lower middle-income groups of the population, since income inequality, which according to official statistics remains quite high, is one of the most acute social problems for contemporary Russian society. On the other hand, the general tendency towards an overall "levelling" that includes the shrinking of the upper groups can lead to a request for a revision of the social contract with the state from the most educated, qualified and well-off groups since it means a decrease in social mobility for them.

Future research might include testing the heuristic potential of the income stratification scale in international comparisons between countries belonging to different income groups and stages

of socio-economic and socio-cultural development; it would be especially interesting to compare models and changes in their configuration over time in societies in transition. Another interesting point of future research would be the analysis of relations between labour market transformations and income stratification, since they are closely interconnected. For many European countries, recent financial and economic crises have brought an erosion of the middle class via changes in the structure of jobs and occupations (Vaughan-Whitehead, 2016); analysis of these transformations in Russia and their connection with income stratification in Russia may provide similar or different results and contribute to our understanding of the specifics of societies in transition.

References

- Abanokova, K. R., & Lokshin, M. M. (2014). Vliyanie ehffekta masshtaba v potreblenii domohozyajstv na bednost v Rossii [Effect of economies of scale in households consumption on poverty in Russia]. *The HSE Economic Journal*, 18(4), 620-644.
- Alesina, A., & Perotti, R. (1996). Income distribution, political instability, and investment. *European Economic Review*, 40(6), 1203-1228. doi:10.1016/0014-2921(95)00030-5
- Anikin, V., & Slobodenyuk, E. (2018). Gde prolegaet "cherta bednosti" v sovremennoj Rossii? [Where does the poverty line in modern Russia lie?]. *Voprosi Ekonomiki*, 1, 104-217.
- Atkinson, A., & Brandolini, A. (2013). On the identification of the middle class. In J. Gornick & M. Jäntti (Eds.), *Income inequality: economic disparities and the middle class in affluent countries* (pp. 77-100). Stanford, California: Stanford University Press.
- Banerjee, A., & Dufo, E. (2008). What is middle class about the middle classes around the world? *The journal of economic perspectives: a journal of the American Economic Association*, 22(2), 3-28. doi: 10.1257/jep.22.2.3
- Barro, R. (2000). Inequality and growth in a panel of countries. *Journal of Economic Growth*, 5, 5-32.
- Beeghley, L. (2004). *The structure of social stratification in the United States*. Boston, MA: Allyn and Bacon.
- Belletini, G., & Ceroni, B. (2007). Income distribution, borrowing constraints and redistributive policies. *European Economic Review*, 51, 625-645. doi: 10.1016/j.euroecorev.2006.03.010
- Birdsall, N., Graham, C., & Pettinato, S. (2000). Stuck in tunnel: Is globalization muddling the middle? *Center on Social and Economic Dynamics Working Paper*, 14.
- Blackburn, M., & Bloom D. (1985). What is happening to the middle class? *American Demographics*, 7(1), 18-25.
- Bobkov, V. N. (2012). 20 let kapitalisticheskikh transformacij v Rossii vliyanie na uroven i kachestvo zhizni [20 Years of Capitalist Transformations in Russia: Impact on the Level and Quality of Life]. *Universe of Russia*, 21(2), 3-26.
- Brzezinski, M. (2010). Income affluence in Poland. *Social Indicators Research*, 99, 285-299. doi: 10.1007/s11205-010-9580-0
- Burkhauser, R., Smeeding T., & Merz, J. (1996). Relative inequality and poverty in Germany and the United States using alternative equivalency scales. *The Review of Income and Wealth*, 42(4), 381-400.
- Cárdenas, M., Kharas, H., & C. Henao. (2011). Latin America's global middle class. *Working Paper, Global Economy and Development at Brookings*. Washington, DC.
- Carroll, C. (2002). Portfolios of the rich. In L. Guiso, M. Haliassos & T. Jappelli (Eds.) *Household portfolios*. Cambridge, MA: MIT Press.
- Chauvel, L. (2006). *Les Classes moyennes à la dérive*. Paris: Le Seuil.
- Chauvel, L. (2013). Welfare regimes, cohorts and the middle classes. In J. Gornick & M. Jäntti (Eds.), *Income inequality: economic disparities and the middle class in affluent countries* (pp. 115-141). Stanford, California: Stanford University Press.

- Chen, S., & Ravallion, M. (2010). China is poorer than we thought, but no less successful in the fight against poverty. In S. Anand, P. Segal & J. Stiglitz (Eds.) *Debates on the measurement of poverty*. Oxford, UK: Oxford University Press.
- Chen, S., & Ravallion, M. (2010). The developing world is poorer than we thought, but no less successful in the fight against poverty. *Quarterly Journal of Economics*, 125(4), 1577-1625. doi: 10.1162/qjec.2010.125.4.1577
- Chun, N., Hasan, R., Rahman, M. H., & Ulubaşoğlu, M. A. (2016). The role of middle class in economic development: what do cross-country data show? *Review of Development Economics*, 21, 404-424. doi:10.1111/rode.12265
- Court, D., & Narasimhan, L. (2010). Capturing the world's emerging middle class. *McKinsey Quarterly*, July. Retrieved from http://www.mckinsey.com/insights/consumer_and_retail/capturing_the_worlds_emerging_mi ddle_class
- Cowell, F. (2011). *Measuring inequality* (3rd ed.). Oxford: Oxford University Press.
- Dallinger, U. (2013). The endangered middle class? A comparative analysis of the role played by income redistribution. *Journal of European Social Policy*, 23(1), 83-101. doi: 10.1177/0958928712456573
- Dang, H. & Ianchovichina, E. (2016). Welfare dynamics with synthetic panels: the case of the Arab world in transition. *Policy Research working paper*, No. WPS 7595. Washington, D.C.: World Bank Group.
- Danziger, S., Gottschalk, P., & Smolensky, E. (1989). How the rich have fared, 1973-87. *The American Economic Review*, 79(2), 310-314.
- Davis, J., & Huston, H. (1992). The shrinking middle-income class: a multivariate analysis. *Eastern Economic Journal*, 18(3), 277-285.
- Deaton, A., & Aten, B. (2014). Trying to understand the PPPs in ICP2011: why are the results so different? *NBER working papers*, 20244.
- Dynan, K., Skinner, J., & Zeldes, S. (2004). Do the rich save more? *Journal of Political Economy*, 112(2), 397-444. doi:10.1086/381475
- Easterly, W. (2001). The middle class consensus and economic development. *Journal of economic growth*, 6(4), 317-335. doi:10.1023/A:1012786330095
- Eisenhauer, J. G. (2011). The rich, the poor, and the middle class: thresholds and intensity indices. *Research in Economics*, 65(4), 294-304. doi: 10.1016/j.rie.2011.01.002
- Eurostat (2017). *Key Figures on Europe – 2017 edition*. Luxembourg: Publications Office of the European Union.
- Feenberg, D., & Poterba, J. (2000). The income and tax share of very high-income households, 1960-1995. *American Economic Review*, 90, 264-270. doi: 10.1257/aer.90.2.264
- Ferreira, F., Messina, J., Rigolini, J., López-Calva, L., Lugo, M., & Vakis, R. (2013). *Economic mobility and the rise of the Latin American middle class*. Washington, DC: World Bank.
- Foster, J. (1998). Absolute versus relative poverty. *American Economic Review*, 88(2), 335-341.
- Fry, R., & Kochhar, R. (2016). Are you in the American middle class? Find out with our income calculator. *Factank*. News in the numbers. Retrieved from <http://www.pewresearch.org/fact-tank/2016/05/11/are-you-in-the-american-middle-class/>.
- Grabka, M., & Frick, J. (2008). The shrinking German middle class – signs of long-term polarization in disposable income? *DIW Berlin Weekly Report*, 4(4), 21-27.
- Grant, A., & Hansl, B. (2015) *Russia economic report: the dawn of a new economic era?* Russia economic report, 33. Washington, DC: World Bank Group.
- Hauser, R., & Becker, I. (2002). Inequalities between income and wealth: the case of Germany in 1998. W. Glatzer (Ed.) *Rich and poor: Disparities, perceptions, concomitants* (pp. 33-43). Dordrecht: Springer Science+Business Media.
- Hirschl, T., Altobelli, J., & Rank, M. (2001). Affluence and marriage: how likely, how often? *Working Paper Series, Centerforthe Study of Inequality*. Cornell. Cornell University.

- Horrigan, M., & Haugen, S. (1988). The declining middle-class thesis: a sensitivity analysis. *Monthly Labor Review*, 111(5), 3-13.
- Kangas, O. (2001). For better or for worse: economic positions of the rich and the poor 1985-1995. *Luxembourg Income Study Working Paper*, 248.
- Kharas, H. (2010). The emerging middle class in developing countries. *OECD Development Centre Working Paper*, 285.
- Lokshin, M., & Yemtsov, R. (2013). Farewell to destitution? *The Journal of the New Economic Association*, 18(2), 158-161.
- López-Calva, L., & Ortiz-Juarez, E. (2014). A vulnerability approach to the definition of the middle class. *Journal of Economic Inequality*, 12, 23-47. doi:10.1007/s10888-012-9240-5
- Lukyanova, A. L. (2013). Ispolzovanie bezusloynykh kvantilnykh regressij pri ocenke vliyaniya neformalnosti na neravenstvo [The impact of informality on earnings inequality: unconditional quantile regressions. *Applied Econometrics*, 32(4), 3-28.
- Medeiros, M. (2006). The rich and the poor: the construction of an affluence line from the poverty line. *Social Indicators Research*, 78(1), 1-18. doi:10.1007/s11205-005-7156-1
- Meyer, M., & Sanchez-Paramo, C. (2014). In focus: economic mobility and middle-class formation. In *Krizis doverija obostrjaet jekonomicheskie problemy Rossii [Confidence Crisis Exposes Economic Weakness]*. World Bank. Russia Economic Report, 31.
- Milanovic, B., & Yitzhaki S. (2002). Decomposing world income distribution: does the world have a middle class? *Review of Income and Wealth*, 48(2), 155-178.
- Mitra, S., Posarac, A., & Vick, B. (2013). Disability and poverty in developing countries: a multidimensional study. *World Development*, 41, 1-18. doi:10.1016/j.worlddev.2012.05.024
- Mozhina, M. A. (2001). *Raspreditelnye otnosheniya dohody i potrebleniye naseleniya (iz nauchnogo naslediya) [Distribution relations: income and consumption of the population (from the scientific heritage)]*. Moscow: Gaynullin.
- Niño-Zarazúa, M., Roope, L., & Tarp, F. (2017). Global inequality: relatively lower, absolutely higher. *Review of Income and Wealth*, 63(4), 661-684. doi: 10.1111/roiw.12240
- OECD (2016). *The squeezed middle class in OECD and emerging countries – myth and reality*. Issues Paper. Paris: OECD Headquarters.
- Ólafsson, S., & Kristjánsson, A. S. (2013). Income inequality in boom and bust: a tale from Iceland's bubble economy. In J. Gornick & M. Jantti (Eds.), *Income inequality: Economic disparities and the middle class in affluent countries* (pp. 416-438). Stanford CA: Stanford University Press.
- Ovcharova, L. (2014). Dohody, neravenstvo, bednost': vyzovy v usloviyah neopredelennosti [Incomes, inequality, poverty: challenges in the face of uncertainty]. In L. Grigoryev & S. Bobilev (Eds.) *Doklad o chelovecheskom razvitii v Rossijskoj Federacii za 2014 god [Report on Human Development in the Russian Federation in 2014]*. Moscow: Analytical center for the government of the Russian Federation.
- Ovcharova, L. (Ed.) (2014). *Dinamika Monetarnykh i Nemonetarnykh Kharakteristik Uroviia Zhizni Rossiiskikh Domokhoziaistv za Gody Postsovetskogo Razvitiia: Analiticheskii Doklad [The dynamics of monetary and non-monetary characteristics of the standard of living of Russian households for the years of postsoviet development: Analytical report]* (2014). Moscow: Fond 'Liberal'naia Missiia'.
- Partridge, M. (1997). Is inequality harmful for growth? Comment. *American Economic Review*, 87(5), 1019-1032.
- Peichl, A., Schaefer, T., & Scheicher C. (2010). Measuring richness and poverty: a micro data application to Europe and Germany. *Review of Income and Wealth*, 56(3), 597-619. doi: 10.1111/j.1475-4991.2010.00404.x
- Peichl, A. & Pestel, N. (2011). Multidimensional affluence: Theory and applications to Germany and the US. *IZA Discussion Papers*, 5926.

- Pew Research Center (2015). *The American middle class is losing ground: No longer the majority and falling behind financially*. Washington, D.C.: December. Retrieved from http://www.pewsocialtrends.org/files/2015/12/2015-12-09_middle-class_FINAL-report.pdf.
- Piketty, T. (2014). *Capital in the twenty-first century*. Cambridge, MA: Harvard University Press.
- Pressman, S. (2007). The decline of the middle class: an international perspective. *Journal of Economic Issues*, 41(1), 181-200. doi: 10.1080/00213624.2007.11507000
- Pressman, S., & Scott, R. H. (2009). Who are the debt poor? *Journal of Economic Issues*, 43(2), 423-432. doi: 10.2753/JEI0021-3624430215
- Rank, M. (1999). The racial injustice of poverty. Working Paper, *George Warren Brown School of Social Work*. Washington University. March.
- Ravallion, M. (2008). A global perspective on poverty in India. *Economic and Political Weekly*, 43(43), 31-37.
- Ravallion, M. (2010). The developing world's bulging (but vulnerable) middle class. *World development*, 38(4), 445-454.
- Ravallion, M., Chen, S., & Sangraula, P. (2009). Dollar a day revisited. *World Bank Economic Review*, 23, 163-184.
- Ravallion, M., & Chen, S. (2011). Weakly relative poverty. *Review of Economics and Statistics*, 93(4), 1251-1261. doi: 10.1162/REST_a_00127
- Ravallion, M., Datt, G., & Van de Walle, D. (1991). Quantifying absolute poverty in the developing world. *Review of Income and Wealth*, 37, 345-361.
- Rose, S. (2016). *The growing size and incomes of the upper middle class*. Urban institute. Research report June 2016. Retrieved from <http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000819-The-Growing-Size-and-Incomes-of-the-Upper-Middle-Class.pdf>
- Rowntree, B. (1901). *Poverty – a study of town life*. London: Macmillan.
- Rowntree, B., & Kendall, M. (1913). *How the laborer lives*. London: Thomas Nelson and Sons.
- Shevyakov, A. Y. (2010). Socialnoe neravenstvo: tormoz ehkonomicheskogo i demograficheskogo rosta [Social inequality: the brake of economic and demographic growth]. *The standard of living of the Russian regions population*, 5, 38-52.
- Slobodenyuk, E. (2017). Posledstviya krizisa 2015 goda: obednenie ili prekarizatsiya? [Consequences of the 2015 crisis: slipping into poverty or precarity?]. *The Journal of Social Policy Studies*, 15(2), 183-200. doi:10.17323/727-0634-2017-15-2-183-200
- Solimano, A. (2008). *The middle class and the development process: International evidence*. Santiago, Chile: Economic Commission for Latin America and the Caribbean. Mimeographed document.
- Smeeding, T. (2006). Poor people in rich nations: The United States in comparative perspective. *Journal of Economic Perspectives*, 20(1), 69-90. doi: 10.1257/089533006776526094
- Statistika SNG (Statisticheskij byulleten'). [CIS Statistics (Statistical Bulletin)]. (2015). 1(544). M. *The Federal State Statistics Service of the Russian Federation* (2015). Social status and standard of living of the Russian population. Moscow: Rosstat.
- Thurow, L. (1987). A surge in inequality. *Scientific American*, 256(5), 30.
- Thurow, L. (1984). The disappearance of the middle class. *New York Times*, February 5, F.3.
- Townsend, P. (1987). Deprivation. *Journal of social policy*, 16(02), 125-146.
- Urban poverty report: a study of poverty, food insecurity and resilience in Afghan cities*. (2014). Danish Refugee Council (DRC).
- Vakis, R., Jamele, R., & Lucchetti, L. (2015). *Overview: left behind. Chronic poverty in Latin America and the Caribbean*. Washington, DC: World Bank.
- Vanneman, R., & Dubey, A. (2013). Horizontal and vertical inequalities in India. In J. Gornick & M. Jantti (Eds.), *Income inequality: Economic disparities and the middle class in affluent countries* (pp. 439-458). Stanford CA: Stanford University Press.

- Vaughan-Whitehead, D. (Ed.). (2016). *Europe's disappearing middle class? Evidence from the world of work*. Cheltenham: Edward Elgar Publishing.
- Weicher, J. (1997). The rich and the poor: Demographics of the U.S. wealth distribution. *Federal Reserve Bank of St. Louis Review*, 79 (4), 25-37.
- Wolff, E. (2010). Recent trends in household wealth in the United States: Rising debt and the middle-class squeeze – an Update to 2007. *Levy Economics Institute Working Paper*. 589.
- World Bank. (2016). *Poverty and shared prosperity 2016: Taking on inequality*. Washington, DC: World Bank.
- Wright, E.O. (2004) Foundations of a neo-Marxist class analysis. In E. O. Wright (Ed.) *Alternative foundations of class analysis*. Cambridge: Cambridge University Press.
- Yasinskiy, A. (2014). *Obzor metodov i istochnikov dannyh dlja izmerenija bednosti v stranah Sodruzhestva [Review of methods and data sources for measuring poverty in the countries of the Commonwealth]*. Minsk: Galateja.

Svetlana V. Mareeva is Candidate of Sciences in sociology (2009), Head of the Center for Stratification Studies at the National Research University Higher School of Economics (Moscow, Russia). General research interests: social structure, social stratification, middle class, sociocultural dynamics. Over 80 papers published including the monograph *Middle Class: Theory and Reality* (2009, co-authored, in Russian); chapters in monographs on the results of international projects (*Handbook on Social Stratification in the BRIC Countries, Change and Perspective* (2013), *People's Dreams in China and in Russia* (2015), *Handbook of the Sociology of Youth in BRICS Countries* (2017)); chapters in Russian monographs and articles in scientific journals.

Yulia P. Lezhnina is Candidate of Sciences in sociology (2010), Senior Researcher at the National Research University Higher School of Economics (Moscow, Russia). General research interests: social structure, social stratification, social policy, sociocultural dynamics. Over 60 papers published including chapters in monographs on the results of international projects (*The Youth and Social Change: a Comparative Study between China and Russia* (2014), *People's Dreams in China and in Russia* (2015), *Handbook of the Sociology of Youth in BRICS Countries* (2017)); chapters in Russian monographs and articles in scientific journals.

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